

PATENT CLAIMS

1. Moulding sand supply apparatus (1) comprising a sand reservoir (2) for delivering sand (3) to a mainly horizontal belt conveyor (4), said belt conveyor (4) being controlled to deliver an appropriate amount of sand for filling a flask (5) positioned to receive sand falling from the belt conveyor, characterised by further comprising means for controlling the belt conveyor speed according to a speed profile providing varying trajectories for the delivered sand resulting in a controlled distribution in the transport direction of the belt conveyor (4) of the sand (3) in the flask (5).
2. Apparatus in accordance with claim 1, characterised by further comprising guide plates (7) to influence the distribution of the sand (3) in a direction perpendicular to the transport direction of the belt conveyor (4).
3. Apparatus in accordance with claim 1 or 2, characterised by further comprising guiding plates (7) to influence the distribution of the sand (3) in the transport direction of the belt conveyor (4).
4. Apparatus in accordance with claim 1 or 2, characterised by further comprising a funnel (8) positioned to guide the falling sand between the belt conveyor (4) and the flask (5).
5. Apparatus in accordance with any of the preceding claims, characterised by further comprising a weighing unit (9) detecting the weight of the sand delivered to the flask (5).
6. Apparatus in accordance with claim 4, characterised by said weighing unit (9) being provided in the form of a sensor activated by the deflection of a structure supporting the flask (10).
7. Method for supplying moulding sand (3) from a sand reservoir (2) via a belt conveyor (4) to a flask (5) comprising the steps of
  - controlling the belt conveyor (4) to supply an appropriate amount of sand (3) for filling a flask (5), characterised by comprising the further steps of:

- controlling the belt conveyor speed according to a varying speed profile providing varying trajectories for the sand leaving the end of the belt conveyor (4), said varying trajectories resulting in a controlled distribution in the transport direction of the belt conveyor (4) of the sand (3) in the flask (5).

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8. Method in accordance with claim 6, **characterised** by comprising the further step of providing guide plates (7) to influence the distribution of the sand in a direction perpendicular to the transport direction of the belt conveyor (4).

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9. Method in accordance with claim 6 or 7, **characterised** by comprising the further step of providing a funnel (8) to guide the falling (3) between the belt conveyor (4) and the flask (5).

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10. Method in accordance with any of the claims 6-8, **characterised** by comprising the further step of using the weight of the sand (3) delivered to the flask (5) as an input to the controller controlling the belt conveyor speed.